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## Memorandum

**From:** Steve Willis  
**To:** Wayne Miller  
**Date:** November 4, 2016  
**Subject:** Site visit to observe well drilling activities at Former Williams AFB Site ST012.

Wayne:

This memo summarizes my visit to Site ST012 conducted on November 4.

I arrived at the site at approximately 12:45 pm. Drilling of well LSZ54 at the north end of the cell phone lot was completed to a depth of 231-ft. I discussed results with Kyle Keegan and observed the drill cuttings. Kyle said that the PID readings he recorded on cuttings from 176 to 231-ft. were <2 ppm. I did not detect any hydrocarbon odors in any cuttings.

I asked Kyle about the location of the next well, and he pointed out the revised location of well CZ23, which was moved to match the location proposed in the September 29 Field Variance Memo.

I then went to observe educator piping being pulled from the following wells:

- Well LSZ40, located near the center of the site. There was a very strong fuel odor at this location, and noticeable biomass on the piping. Water removed from the piping was turbid and grey to black, but did not appear to have a hydrocarbon film.
- Well UWBZ20, located about 30-ft. west of LSZ40. A similar biofilm covered the piping, and there was a strong hydrocarbon odor. Minimal water was poured from the piping back into the well, and it appeared clear.
- Well UWBZ24. Heavy biofilm covered the piping. Hydrocarbon odors were noticeably less than the previous two wells. The ST012 Weekly Reports show that this well was checked for LNAPL using a bailer on three separate dates during July and August. That seems unlikely, as the well was sealed and contained educator influent and effluent piping. AMEC field personnel

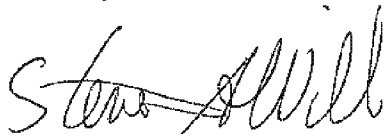
agreed it was unlikely that LNAPL measurements have been collected from this well.

- Well CZ17, located near the south boundary of the site. Biofilm covered the piping. I detected a slight hydrocarbon odor. Minimal water was removed from the piping and I could not discern any NAPL or hydrocarbon sheen.

I left the site at 5:20 pm.

Please contact me if you have comments or questions regarding this memo.

Thank you,

A handwritten signature in black ink, appearing to read "Steven A. Will". The signature is written in a cursive, flowing style with some loops and a horizontal line crossing through the middle.

## **SITE PHOTOS**



Photo 1. Pump rig set up on well LSZ40 ready to remove eductor piping



Photo 2. Draining eductor piping at well LSZ40



Photo 3. Water removed from the eductor piping at well LSZ40



Photo 4. Pump rig set up on well UWBZ20



Photo 5. Eductor piping from well UWBZ20



Photo 6. Pulling eductor piping from well UWBZ24



Photo 7. Pulling eductor piping from well CZ17